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Application Number	09/214,371				
Filing Date	March 26, 1999				
First Named Inventor	David P. Lane				
Art Unit	1635				
Examiner Name	Zara, Jane J.				
Attorney Docket Number	39749-0002 US				

Sheet 1 of 5

U.S. PATENT DOCUMENTS

*Examiner	Cite No.	DOCUMENT NUMBER Number - Kind Code (if known) ²	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
X	A1	US 5,411,860	05-02-1995	Vogelstein et al.	
40	A2	US 5,519,118	05-21-1996	Vogelstein et al.	
	А3	US 5,532,348	07-02-1996	Huibregtse et al.	
	A4	US 5,550,023	08-27-1996	Kinzler et al.	
	A5	US 5,606,044	02-25-1997	Burrell et al.	
	A6	US 5,618,921	04-08-1997	Burrell et al.	

	FOREIGN PATENT DOCUMENTS									
*Examiner		Foreign Patent Document	Publication		Pages, Columns, Lines, Where Relevant					
Initials	Cite No.	County Code ³ -Number ⁴ -Kind Code ⁵ (if known)	Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Passages or Relevant Figures Appear	T _q				
172) B1	PCT WO 94/00601	01-06-1994	Levine et al.						
7	B2	PCT WO 94/08241	04-14-1994	Zentgraf et al	NO Transla.					
	B3	PGT WO 94/10306	05-11-1994	Soussi et al.	No Transla.					
	B4	PCT WO 98/01467	01-15-1998	Lane et al.						
T	B5	PCT WO 98/13064	04-02-1998	Lu et al.						

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tnitiats	number(s), publisher, city and/or country where published Barak, Y. et al., "mdm2 expression is induced by wild type p53 activity," EMBO J., 12(2): 461- 468, Feb 1993		T ²
72			
00	C2	Barak Y & Oren M., "Enhanced binding of a 95 kDa protein to p53 in cells undergoing p53- mediated growth arrest," EMBO J., 11(6): 2115-2121, Jun 1992	
	C3	Böttger A. et al., "Design of a synthetic Mdm2-binding mini protein that activates the p53 response in vivo," Curr. Biol., 7: 860-869, Oct 1997	
	C4	Brown D.R. et al., "The tumor suppressor p53 and the oncoprotein simian virus 4D T antigen bind to overlapping domains on the MDM2 protein," Mol. Cell. Biol., 13(11): 6849-6857, Nov 1993	
	C5	Cahilly-Snyder L. et al., "Molecular analysis and chromosomal mapping of amplified genes isolated from a transformed mouse 3T3 cell line," Somatic Cell Mol. Genet., 13 (3): 235-244, May 1987	
	C6	Chen C.Y. et al., "Interactions between p53 and MDM2 in a mammalian cell cycle checkpoint pathway," PNAS USA, 91(7): 2684-2688, Mar 1994	
	C7	Chen J. et al., "Mapping of the p53 and mdm-2 interaction domains," Mol. Cell Biol., 13: 4107-4114, Jul 1993	
	C8	Colas P. et al., "Genetic selection of peptide aptamers that recognize and inhibit cyclindependent kinase 2," Nature, 380: 548-550, Apr 1996	
	C9	Deffie A. et al., "The tumor suppressor p53 regulates its own transcription," Mol. Cell. Biol., 13: 3415-3423, Jun 1993	
	C10	Dyson N. et al., "Adenovirus E1A makes two distinct contacts with the retinoblastoma protein," J. Virology, 66: 4606-4611, Jul 1992	
	C11	Dyson N. et al., "Homologus sequences in adenovirus E1A and human papillomavirus E7 proteins mediate interaction with the same set of cellular proteins," J. Virology, 66: 6893-6902, Dec 1992	
T	C12	Farmer G. et al., "Wild-type p53 activates transcription in vitro," Nature, 358: 83-86, Jul 1992	

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0

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Examiner Name	Zara, Jane J.				
Attorney Docket Number	39749-0002 US				

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OTHER DOCUMENTS - NON-PATENT LITERATURE DOCUMENTS

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3	C13	Finlay, C.A., "The mdm-2 Oncogene can overcome wild-type p53 suppression of transformed cell growth," Mol. Cell. Biol., 13(1): 301-306, Jan 1993	
PP	C14	Florenes V.A. et al., "MDM2 gene amplification and transcript levels in human sarcomas: Relationship to TP53 gene status," J. Nat. Cancer Institute, 86(17): 1297-1302, Sep 1994	
•	C15	Funk W. D. et al., "A transcriptionally active DNA-binding site for human p53 protein complexes," Mol. Cell. Biol., 12(6): 2866-2871, Jun 1992	•
	C16	Garcia-Echeverria C. et al., "Structure activity studies of peptide inhibitors of the p53-HDM2 interaction," 15 th American Peptide Symposium, Jan 1997	
	C17	Haupt Y. et al., "Cell type-specific inhibition of p53-mediated apoptosis by mdm2," EMBO J., 15(7): 1596-1606, Apr 1996	
	C18	Hupp T.R. et al., "Small peptides activate the latent sequence-specific DNA binding function of p53," Cell, 83: 237-245, Oct 1995	
	C19	Jones S.N. et al., "Rescue of embryonic lethality in Mdm-1deficient mice by absence of p53," Nature, 378: 206-208, Nov 1995	
	C20	Juven T. et al., "Wild type p53 can mediate sequence-specific transactivation of an internal promoter within the mdm2 gene," Oncogene, 8(12): 3411-3416, Dec 1993	
	C21	Kern S.E. et al., "Oncogenic forms of p53 inhibit p53-regulated gene expression," Science, 256: 827-830, May 1992	
	C22	Kovar H. et al., "Narrow spectrum of infrequent p53 mutations and absence of MDM2 amplification in Ewing tumours," Oncogene, 8(10): 2683-90, Oct 1993	
	C23	Kussie P.H. et al., "Structure of the MDM2 oncoprotein bound to the p53 tumor suppressor transactivation domain," Science, 274: 948-953, Nov 1996	
	C24	LaVallie E.R. et al., "A thioredoxin gene fusion expression system the E. coli cytoplasm," Biotechnology, 11(2): 187-193, Feb 1993	
V	C25	Lane D. et al., "On the regulation of the p53 tumour suppressor, and its role in the cellular response to DNA damage," Phil. Trans. R. Soc. Lond. B, 347: 83-87, 1995	

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	OTHER DOCUMENTS - NON-PATENT LITERATURE DOCUMENTS							
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	2	C26	37 in the	Lees-Miller S.P. et al., "Human DNA-activated protein kinase phosphorylates serines 15 and 37 in the amino-terminal transactivation domain of human p53," Mol. Cell Biol., 12(11):5041-5049, Nov 1992				
	0	C27	Lin J. et	<i>al.</i> , "Fu		_	rowth regulation and tumor suppression," Cold gy, LIX: 215-223, 1994	
		C28	Livy 0. One and HO's its between the advisor of the state of the AAAD					
		C29	Liu X. et al., "The p53 activation domain binds the TATA box-binding polypeptide in holo-TFIID, and a neighboring p53 domain inhibits transcription," Mol. Cell. Biol., 13: 3291-3300, Jun 1993					**-
		C30		Lu X. & Lane D., "Differential induction of transcriptionally active p53 following UV or □onizing radiation: Defects in chromosome instability syndromes?," Cell, 75: 765-778, Nov 1993				
		C31	Martin K	et al.,			scriptional activity by MDM2 oncoprotein,"	
		C32	Marston	N.J. et	al., "Interaction of p53 w		OM2 is independent of E6 and does not mediate Oncogene, 9: 2707-2716, Sep 1994	
		C33	Michalov	ita D. e		on of	transformation and of cell proliferation by q	
		Midgley C.A. et al., "Analysis of p53 expression in human tumours: an antibody raised against human p53 expressed in Escherichia coli," J. Cell Science, 101(1): 183-189, Jan 1992						•
		C35	Montes de Oca Luna R. et al., "Rescue of early embryonic lethality in mdm1-deficient," Nature, 378: 203-206, Nov 1995					
		C36	Oliner J.D. et al., "Amplification of a gene encoding a p53-associated protein in human sarcomas," Nature, 358: 80-83, Jul 1992.					
	\mathcal{J}	C37	Oliner J.I	D. et al.			ls the activation domain of tumour suppressor	

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	Otto A. & Deppert W, "Upregulation of mdm-2 expression in meth a tumor cells tolerating wild-type p53," Oncogene, 8(9): 2591-2603, Sep 1993					
7	10	C39 ,	Picksley S. & Lane D., "The p53-mdm2 autoregulatory feedback loop: a paradigm for the regulation of growth control by p53," BioEssays, 15(10): 689-699, Oct 1993			
		C40	Renzing J. & Lane D., "p53-dependent growth arrest following calcium phosphate-mediated transfection of murine fibroblasts," Oncogene, 10(9): 1865-1868, May 1995			
	Schlaeppi JM. et al., "Identification of specific hdm2 binding peptides by affinity selection and mass spectrometry," 17 th International Congress of Biochemistry and Molecular Biology, San Francisco, USA, Aug 1997					
	Schlichtholz B. et al., "The immune response to p53 in breast cancer patients is directed against immunodominant epitopes unrelated to the mutational hot spot," Cancer Res., 52: 6380-6384, Nov 1992					
		Stephen C.W. et al., "Characterisation of epitopes on human p53 using phage displayed peptide libraries: Insights into antibody-peptide interactions," J. Mol. Biol., 248(1): 58-78, Apr 1995				
		Unger T. et al., "P53: a transdominant regulator of transcription whose function is ablated my mutations occurring in human cancer," EMBO J., 11(4): 1383-1390, Apr 1992				
		C45	Vojtesek B. & Lane D., "Regulation of p53 protein expression in human breast cancer cell lines," J. Cell Science, 105(3): 607-612, Jul 1993			
		C46	Wasylyk C. et al., "P53 mediated death of cells overexpressing MDM2 by an inhibitor of MDM2 interaction with p53," Oncogene 18: 1921-1934, Mar 1999			
	C47 Wu X. et al., "The p53-mdm-2 autoregulatory feedback loop," Genes & Dev., 7: 1126-1132, July 1993					

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